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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/885,579	06/20/2001	Yoichiro Sako	450100-3601.8	4895

20999 7590 10/07/2004

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EXAMINER

TRUONG, THANHNGA B

ART UNIT

PAPER NUMBER

2135

DATE MAILED: 10/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/885,579

Applicant(s)

SAKO ET AL.

Examiner

Thanhnga Truong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 59-123 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 59-123 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☒ Certified copies of the priority documents have been received in Application No. 08/690,224.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/5/01, 6/20/01</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-58 have been cancelled by the applicant. Claims 59-105 have been examined.

Priority

2. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 08/690224, filed on 19 July 1996. **Claim Objections**

3. Claim 111 objected to because of the following informalities: copy is misspelled at line 16 of claim. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 115 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Claim 115 recites the limitation "said analog signal" in line 1 of claim. There is insufficient antecedent basis for this limitation in the claim. **Double Patenting**

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double

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patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 59-62, 72-77, 86-90, and 99-105 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-2, and 4-22 of U.S. Patent No. 6,185,687 (hereinafter '687 Patent).

As per claims 59 and 86 of the instant application, '687 Patent discloses similar reading out control information (col 20 ln 7-10) supplied by said source (from a playback mode control signal area of said signal record medium (col 20 ln 7-9) and performing means (col 20 ln 11-13).

As per claims 60-62 of the instant application, claims 2 and 4-5 of the '687 Patent recites the same limitations.

As per claims 72-77 of the instant application, claims 6-11 of the '687 Patent recites the same limitations.

As per claims 87-90 of the instant application, claims 13-16 of the '687 Patent recites the same limitations.

As per claim 99 of the instant application, claim 15 of the '687 Patent recites the same limitations.

As per claims 100-105 of the instant application, claims 17-122 of the '687 Patent recites the same limitations.

9. Claims 106-107 and 110-112 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 23-26 of U.S. Patent No. 6,185,687 (hereinafter '687Patent) in view of Kanota et al (hereinafter Kanota), US Patent 5,418,853.

As per claim 106 of the instant application, '687 patent recites similar generating (col 21 ln 42-43), ciphering (col 21 ln 44-45), arraying (col 21 ln 46-51), and recording means (col 21 ln 51-55). As for compressing said signal to generate a compressed signal, Kanota discloses a means of compressing data to be recorded (col 4 ln 45-47). Both Kanota and the '687 Patent disclose a means for recording a signal on a recording medium. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to combine the teachings of Kanota within the '687 Patent because it would have increased storage space through storing a smaller amount of data representing the same signal.

As per claim 107 of the instant application, claim 24 of the '687 Patent recites the same limitations.

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As per claim 111 of the instant application, '687 patent recites similar generating (col 21 ln 60-62), ciphering (col 21 ln 63-65), annexing (col 21 ln 66- col 22 ln 3), and recording means (col 22 ln 4-9). As for compressing said signal to generate a compressed signal, Kanota discloses a means of compressing data to be recorded (col 4 ln 45-47). Both Kanota and the '687 Patent disclose a means for recording a signal on a recording medium. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to combine the teachings of Kanota within the '687 Patent because it would have increased storage space through storing a smaller amount of data representing the same signal.

As per claim 112 of the instant application, claim 26 of the '687 Patent recites the same limitations.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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11. Claims 59-60, 73, 75-77, 86-87, 101 and 103-105 are rejected under 35 U.S.C. 102(e) as being anticipated by Kanota et al (hereinafter Kanota), US Patent 5,418,853.

As per claims 59 and 86, Kanota discloses a means for reproducing digital data from a signal source (col 3 ln 11-15), comprising the steps of:

reading out recording control information supplied by said source, said recording control information indicating the playback mode of said source (col 3 ln 30-35 and col 4 ln 2-16); and

performing a pre-set conversion operation on said digital data and/or an analog signal generated from said digital data, based on said recording control information (converts the received analog signal, col 4 ln 41-56).

As per claims 60 and 87, Kanota discloses the claimed limitations as described above (see claim 59). As for wherein said digital data is partitioned into sectors or blocks and said recording control information is included in at least one of said sectors or blocks, Kanota discloses digital data with control information being multiplexed within the signal (col 3 ln 49-50) and digital recording of such a signal (col 3 ln 1-2). Such recording and reproducing of multiplexed digital data inherently anticipates such digital data being partitioned into sectors or blocks.

As per claims 73 and 101, Kanota discloses the claimed limitations as described above (see claim 59) and further discloses wherein said analog signal is an analog video signal and wherein the pre-set conversion operation includes arraying a combination signal of plural pseudo synchronization pulses and plural white peak signals across plural horizontal periods in a vertical blanking period of said analog video signal (col 3 ln 40-63).

As per claims 75 and 103, Kanota discloses the claimed limitations as described above (see claim 59) and further discloses wherein the pre-set conversion operation includes arraying a signal coded with plural bits at a pre-set position in said analog signal (col 3 ln 54-63).

As per claims 76 and 104, Kanota discloses the claimed limitations as described above (see claim 75) further discloses wherein said analog signal is an analog video signal and said pre-set position is a predetermined horizontal period within a vertical blanking period of said analog video signal.

As per claims 77 and 105, Kanota discloses the claimed limitations as described above (see claim 75) and further discloses wherein said coded signal includes a recording limitation signal indicating a limitation on recording (ID signal, col 3 ln 25-52).

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As per claim 88, Kanota discloses the claimed limitations as described above (see claim 86) and further discloses wherein digital data is digital audio and/or digital video data (col 2 ln 25-26) said pre-set conversion operation is performed on said audio and/or video based on said recording control information (col 4 ln 35-56).

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 61-66, 71-72, 78, 80-85, 89-94 and 99-100 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanota et al (hereinafter Kanota), US Patent 5,418,853 in view of Kondo, US Patent 5,538,773.

As per claims 61 and 89, Kanota discloses the claimed limitations as described above (see claim 59). Kanota does not explicitly teach wherein the pre-set conversion operation on said digital data is a digital descrambling operation. However, Kondo discloses a means of reproduction and recording of digital data (abstract) wherein said digital data is descrambled during reproduction (col 3 ln 34-39). Both Kanota and Kondo disclose a means of digital recording and reproducing including copy control. It would have been obvious to

on of ordinary skill in the art at the time of the applicant's invention to combine such descrambling of Kondo within the system of Kanota because it would have increased copy protection and restricted viewing by inhibiting reproduction of digital data.

As per claims 62 and 90, Kanota-Kondo discloses the claimed limitations as described above (see claim 61). Kondo further discloses wherein said digital data is ciphered data and said pre-set conversion operation on said digital data includes an operation of deciphering said digital data using key information derived from information used to generate said ciphered data (col 4 ln 7-14).

As per claims 63 and 91, Kanota-Kondo discloses the claimed limitations as described above (see claim 62). Kanota further discloses a digital video cassette as a source for recording (VTR, abstract). Kanota does not disclose wherein said source is a disc-shaped medium. However, Kondo further discloses wherein said source is a disc-shaped recording medium and said key information is recorded at a pre-set position of said recording medium (col 4 ln 7-14 and figs 3 and 4). Both Kanota-Kondo disclose a means of copy inhibition of digital data on a record medium. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to combine the recording medium of Kondo within the system of Kanota because it would have increased usability and memory size. Disc shaped recording mediums are well known in

the art to be able to hold more data as well as more general usage throughout many common known medium players, such as cd players or DVD players.

As per claims 64, Kanota-Kondo discloses the claimed limitations as described above (see claim 63). Kondo further discloses wherein said digital data is partitioned into units (col 4 ln 15-27). As for at least one of said units is recorded at said pre-set position, Kondo discloses a data recording area and a cipher key area of the recording medium (col 2 ln 61-67) for storing ciphered digital data and key information for reproduction and recording. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have a design choice in recording said units at said pre-set position because the applicant has not explicitly stated such recording units to solve any particular problem or any particular reasons of such recording and that the means of digitally recording ciphered data of Kondo would have been just as efficient.

As per claim 65, Kanota-Kondo discloses the claimed limitations as described above (see claim 64). Kondo further discloses, wherein said at least one unit is located in a lead-in area and/or a program area of said recording medium (col 2 ln 61-66).

As per claim 66, Kanota-Kondo discloses the claimed limitations as described above (see claim 65). As for wherein said at least one unit is placed in a header area of said program area, Kondo discloses recording and reproduction of data from a CD or CD-ROM (col 4 ln 50-59). Such data units in a header area of the program area are inherent to any data being recorded on a CD or CD-ROM.

As per claim 71, Kanota discloses the claimed limitations as described above (see claim 59). Kanota further discloses wherein said digital data is ciphered video and/or audio data (col 5 ln 34-40). Kanota does not explicitly teach said pre-set conversion operation on said digital data is an operation of deciphering the digital data using at least a portion of the recording control information.

However, Kondo discloses a means of reproduction and recording of digital data (abstract) wherein said digital data is descrambled during reproduction (col 3 ln 34-39) using recording control information (cipher key information (col 3 ln 34-39). Both Kanota and Kondo disclose a means of digital recording and reproducing including copy control. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to combine such descrambling of Kondo within the system of Kanota because it would have increased copy protection and restricted viewing by inhibiting reproduction of digital data.

As per claims 72 and 100, Kanota discloses the claimed limitations as described above (see claim 59). Kanota further discloses wherein said digital data is ciphered video and/or audio data (col 5 ln 34-40). Kanota does not explicitly teach said pre-set conversion operation on said digital data is an operation of deciphering the digital data using at least a portion of the recording control information.

However, Kondo discloses a means of reproduction and recording of digital data (abstract) wherein said digital data is descrambled during reproduction (col 3 ln 34-39) according to decoding means specified by at least a portion of said recording information (deciphering rules, col 4 ln 7-13). Both Kanota and Kondo disclose a means of digital recording and reproducing including copy control. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to combine such descrambling of Kondo within the system of Kanota because it would have increased copy protection and restricted viewing by inhibiting reproduction of digital data.

As per claim 78, Kanota discloses a means of reproducing digital video data (col 3 ln 11-15) comprising:

detecting recording control information (copy guard) from said video signal record medium, said recording control information indicating the playback mode of said record medium (col 3 ln 30-35); and

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performing a pre-set conversion operation on an analog video signal and/or said digital video data (col 3 ln 53-63), based on the detected recording control information, wherein said pre-set conversion operation on said analog video signal includes arraying a combination of plural pseudo synchronization pulses and plural white peak signals across plural horizontal periods in a vertical blanking period of said analog video signal (col 3 ln 53-53), and wherein said digital video data is ciphered data (scramble, col 5 ln 34-40).

Kanota does not and said pre-set conversion operation on said digital video data includes deciphering said digital video data using key information. However, Kondo discloses a means of reproduction and recording of digital data (abstract) wherein said digital data is descrambled during reproduction (col 3 ln 34-39). Both Kanota and Kondo disclose a means of digital recording and reproducing including copy control. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to combine such descrambling of Kondo within the system of Kanota because it would have increased copy protection and restricted viewing by inhibiting reproduction of digital data.

As per claim 80, Kanota-Konda discloses the claimed limitations as described above (see claim 78). Kanota further discloses wherein said pre-set conversion operation includes arraying a signal coded with plural bits at a pre-set position in said analog video signal (col 3 ln 40-63), said signal coded with plural

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bits being a recording limitation signal indicating a limitation on recording (ID signal, col 3 ln 25-52).

As per claim 81, Kanota-Konda discloses the claimed limitations as described above (see claim 78). As for wherein said digital video data is partitioned into sectors or blocks and said recording control information is included in at least one of said sectors or blocks, Kanota discloses digital data with control information being multiplexed within the signal (col 3 ln 49-50) and digital recording of such a signal (col 3 ln 1-2). Such recording and reproducing of multiplexed digital data inherently anticipates such digital data being partitioned into sectors or blocks

As per claim 82, Kanota-Konda discloses the claimed limitations as described above (see claim 81). As for wherein at least one of said sectors or blocks is placed in a lead-in area and/or a program area of said recording medium, Kanota discloses data placed in a lead-in area and/or a program area of said recording medium (col 4 ln 50-56).

As per claim 83, Kanota-Konda discloses the claimed limitations as described above (see claim 82). Konda further discloses wherein said recording control information includes key information derived from information used to generate said ciphered data (col 3 ln 33-39). One of ordinary skill in the art at the

time of the applicant's invention would have realized such key information in the Kanota-Konda combination to be inherent to the ciphering of digital data.

As per claim 84, Kanota-Konda discloses the claimed limitations as described above (see claim 83). As for key information is placed into said sectors or blocks of said lead-in area and/or said program area, Konda discloses a means of placing key information into said pre-set position of the recording medium (fig 3 and col 2 ln 61-67). It would have been obvious for one of ordinary skill in the art at the time of the applicant's invention to have a design choice of such placing of key information because the applicant has not explicitly stated such placing to solve any particular problem or any particular reasons of such placing and that the means of digitally recording ciphered data of Kanota-Kondo would have been just as efficient.

As per claim 85, Kanota-Konda discloses the claimed limitations as described above (see claim 83). As for wherein said key information is placed into a header area of said program area, Konda discloses a means of placing key information into said pre-set position of the recording medium (fig 3 and col 2 ln 61-67). It would have been obvious for one of ordinary skill in the art at the time of the applicant's invention to have a design choice of such placing of key information because the applicant has not explicitly stated such placing to solve any particular problem or any particular reasons of such placing and that the

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means of digitally recording ciphered data of Kanota-Kondo would have been just as efficient.

As per claim 92, Kanota-Konda discloses the claimed limitations as described above (see claim 92). As for wherein said digital data is partitioned into sectors or blocks and said recording control information is included in at least one of said sectors or blocks, Kanota discloses digital data with control information being multiplexed within the signal (col 3 ln 49-50) and digital recording of such a signal (col 3 ln 1-2). Such recording and reproducing of multiplexed digital data inherently anticipates such digital data being partitioned into sectors or blocks.

As per claim 93, Kanota-Kondo discloses the claimed limitations as described above (see claim 92). Kondo further discloses, wherein said at least one sector or block is located in a lead-in area and/or a program area of said recording medium (col 2 ln 61-66).

As per claim 94, Kanota-Kondo discloses the claimed limitations as described above (see claim 93). As for wherein said at least one sector or block is placed in a header area of said program area, Kondo discloses recording and reproduction of data from a CD or CD-ROM (col 4 ln 50-59). Such sectors or

blocks in a header area of the program area are inherent to any data being recorded on a CD or CD-ROM.

As per claim 99, Kanota discloses the claimed limitations as described above (see claim 88). Kanota further discloses wherein said digital data is ciphered data (scramble, col 5 ln 56-64). Kanota does not explicitly teach said pre-set conversion operation on said digital data is an operation of digitally deciphering said digital data. However, Kondo discloses a means of reproduction and recording of digital data (abstract) wherein said digital data is descrambled during reproduction (col 3 ln 34-39). Both Kanota and Kondo disclose a means of digital recording and reproducing including copy control. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to combine such descrambling of Kondo within the system of Kanota because it would have increased copy protection and restricted viewing by inhibiting reproduction of digital data.

14. Claims 67-70 and 95-98 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanota et al (hereinafter Kanota), US Patent 5,418,853 in view of Kondo, US Patent 5,538,773, and further in view of Sato, US Patent 5,392,128.

As per claims 67 and 95, Kanota-Kondo discloses the claimed limitations as described above (see claim 62). Kanota further discloses a digital video cassette as a source for recording (VTR, abstract). Kondo further discloses

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recording key information at a pre-set position of said recording medium. One of ordinary skill in the art at the time of the applicant's invention would have realized such recording information in a pre-set position in the Kanota-Kondo combination in order for descrambling to take place.

Kanota-Kondo does not disclose wherein said source is an Integrated Circuit. However, Sato discloses recording of digital data wherein said source is an Integrated Circuit (IC) recording medium (col 14 ln 4-11). Both Kanota-Kondo and Sato disclose a means of digital recording and copy protection. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to combine the teachings of Sato within the system of Kondo because it would have provided an alternative means of compact storage of data. IC recording mediums are well known in the art to be a compact form of storage resilient to data loss due to scratching of surfaces, such as CDs.

As per claim 68, Kanota-Kondo-Sato discloses the claimed limitations as described above (see claim 67). Kondo further discloses wherein said digital data is partitioned into units (col 4 ln 15-27). As for at least one of said units is recorded at said pre-set position, Kondo discloses a data recording area and a cipher key area of the recording medium (col 2 ln 61-67) for storing ciphered digital data and key information for reproduction and recording. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have a design choice in recording said units at said pre-set position

because the applicant has not explicitly stated such recording units to solve any particular problem or any particular reasons of such recording and that the means of digitally recording ciphered data of Kondo would have been just as efficient.

As per claim 69, Kanota-Kondo-Sato discloses the claimed limitations as described above (see claim 68). Kondo further discloses, wherein said at least one unit is located in a lead-in area and/or a program area of said recording medium (col 2 ln 61-66). Such data being present at a lead-in area and/or program area of any digital data recording medium is inherent as to data needed for the operation of reading and reproducing such data. One of ordinary skill in the art at the time of the applicant's invention would have realized such units located in a lead-in and/or a program area of said recording medium to be inherent to the Kanota-Kondo-Sato combination.

As per claim 70, Kanota-Kondo-Sato discloses the claimed limitations as described above (see claim 69). As for wherein said at least one unit is placed in a header area of said program area, such data units in a header area of the program area are inherent to any data being recorded on a digital recording medium. One of ordinary skill in the art at the time of the applicant's invention would have realized such units located in a header area of said program area of said recording medium to be inherent to the Kanota-Kondo-Sato combination.

As per claim 96, Kanota-Kondo-Sato discloses the claimed limitations as described above (see claim 95). As for wherein said digital data is partitioned into sectors or blocks and said recording control information is included in at least one of said sectors or blocks, Kanota discloses digital data with control information being multiplexed within the signal (col 3 ln 49-50) and digital recording of such a signal (col 3 ln 1-2). Such recording and reproducing of multiplexed digital data inherently anticipates such digital data being partitioned into sectors or blocks.

As per claim 97, Kanota-Kondo-Sato discloses the claimed limitations as described above (see claim 96). Kondo further discloses, wherein said at least one sector or block is located in a lead-in area and/or a program area of said recording medium (col 2 ln 61-66). Such data being present at a lead-in area and/or program area of any digital data recording medium is inherent as to data needed for the operation of reading and reproducing such data. One of ordinary skill in the art at the time of the applicant's invention would have realized such blocks or sectors located in a lead-in and/or a program area of said recording medium to be inherent to the Kanota-Kondo-Sato combination.

As per claim 98, Kanota-Kondo-Sato discloses the claimed limitations as described above (see claim 97). As for wherein said at least one sector or block

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is placed in a header area of said program area, such data in a header area of the program area are inherent to any data being recorded on a digital recording medium. One of ordinary skill in the art at the time of the applicant's invention would have realized such sectors or blocks located in a header area of said program area of said recording medium to be inherent to the Kanota-Kondo-Sato combination.

15. Claims 74 and 102 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanota et al (hereinafter Kanota) in view of Ryan, US Patent 4,577,216.

As per claims 74 and 102, Kanota discloses the claimed limitations as described above (see claim 59). Kanota discloses such recording of analog video signal, however is silent on such video signals associated color burst signal and wherein the phase of at least a portion of said color burst signal is changed from an original state. Ryan discloses copy inhibition of video signals having such associated color burst signal and wherein the phase of at least a portion of said color burst signal is changed from an original state (see for example; col 2 In 1-51). Both Kanota and Ryan disclose a means of inhibiting copying of video data using copy protection. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to combine the analog signal of Ryan within the system of Kanota because it would have increased visual appeal of the recorded video data due to the extension into color video signals.

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16. Claim 79 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kanota et al (hereinafter Kanota), US Patent 5,418,853 in view of Kondo, US Patent 5,538,773, and further in view of Ryan, US Patent 4,577,216.

As per claim 79, Kanota-Konda discloses the claimed limitations as described above (see claim 78). Kanota_Konda discloses such recording of analog video signal, however is silent on such video signals associated color burst signal and wherein the phase of at least a portion of said color burst signal is changed from an original state. Ryan discloses copy inhibition of video signals having such associated color burst signal and wherein the phase of at least a portion of said color burst signal is changed from an original state (see for example; col 2 ln 1-51). Both Kanota-Konda and Ryan disclose a means of inhibiting copying of video data using copy protection. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to combine the analog signal of Ryan within the system of Kanota-Konda because it would have increased visual appeal of the recorded video data due to the extension into color video signals.

17. Claims 106-109, 111-115, and 117 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanota et al (hereinafter Kanota), US Patent 5,418,853, in view of Takashi, US Patent 5,960,151, and further in view of Konda, US Patent 5,538,773.

As per claims 106 and 111, Kanato discloses a means of recording a signal (col 3 ln 11-15), comprising:

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generating recording control information for supervising recording of said signal on a signal record medium (ID signal, col 3 ln 53-63);

compressing said signal to generate a compressed signal (col 4 ln 47-56);

ciphering said compressed signal according to key information to generate a ciphered signal (scramble, col 4 ln 50-60); and

recording on said signal record medium the signal at a program area of said record medium (col 3 ln 50-56).

Kanota further discloses recording control information such that when a second record medium is generated by replicating said record medium (col 6 ln 5-10), said recording control information indicates the playback mode of said second record medium during analog reproduction of said signal of said second record medium (col 3 ln 40-63). Kanota is silent on such arraying of said recording control information at a pre-set position of said signal record medium and recording at a pre-set position of said record medium analog copy protection bits.

However, Takashi discloses generating of copy management information (col 5 ln 49-50) and such arraying and recording means of said recording control information with compressed video data (col 5 ln 49-59 and col 6 ln 12-19). Both Kanota and Takashi disclose a means of inhibiting copying of video signals. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to combine the arraying and recording means of Takashi within the system of Kanota because it would have increased copy protection by

recording appended copy management data on the newly recorded video data such that further inhibition of recording is extended to the newly recorded data.

Furthermore, Kanota-Takashi does not explicitly teach ciphering wherein said key information is used for deciphering said ciphered signal when said ciphered signal is reproduced and recording at a pre-set position said key information as said recording control information.

Kondo discloses a means of ciphering (scrambling) data according to key information and wherein said key information is used for deciphering said ciphered signal when said ciphered signal is reproduced (col 3 ln 33-38) and such recording means of recording the scrambled data with said key information, said key information being recorded at a pre-set position of a record medium (fig 3 and col 2 ln 61-67).

Both Kanota-Takashi and Kondo disclose a means of inhibiting copying of a signal. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to combine the recording means of Kondo within the Kanota-Takashi combination because it would have increased copy protection and usefulness of the newly recorded data by allowing for the deciphering of video data during reproduction of the newly copied video data. Thus providing a means of protecting data through ciphering and a means of reproducing the ciphered data.

In further regard to claim 111, Takashi further discloses such annexing means (col 5 ln 49-59 and col 6 ln 12-19).

As per claims 107 and 112, Kanota-Takashi-Kimoto discloses the claimed limitations as described above (see claim 106). Kanota further discloses wherein said digital data is partitioned into units (digital video and digital audio, col 4 ln 47-56) and said recording control information is included in at least one of said units (col 4 ln 61-66).

As per claims 108 and 113, Kanota-Takashi-Kimoto discloses the claimed limitations as described above (see claim 107). Kanota further discloses wherein said at least one unit is placed in a lead-in area and/or said program area of said recording medium (col 4 ln 54-56, such data recorded on a recording medium must inherently include data in a lead-in area and or said program area in order for the data to be read for reproduction).

As per claim 109, Kanota-Takashi-Kimoto discloses the claimed limitations as described above (see claim 107). Kanota further discloses a digital video cassette as a source for recording (VTR, abstract). Kanota-Takashi does not disclose wherein said source is a disc-shaped medium.

However, Kondo further discloses wherein said source is a disc-shaped recording medium and said key information is recorded at a pre-set position of said recording medium (col 4 ln 7-14 and figs 3 and 4). Both Kanota-Takashi and Kondo disclose a means of copy inhibition of digital data on a record

medium. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to combine the recording medium of Kondo within the system of Kanota-Takashi because it would have increased usability and memory size. Disc shaped recording mediums are well known in the art to be able to hold more data as well as more general usage throughout many common known medium players, such as cd players or DVD players.

As for claim 114, Kanota-Takashi-Kondo discloses the claimed limitations as described above (see claim 113). As for wherein said key information is placed into a header area of said program area, Konda discloses a means of placing key information into said pre-set position of the recording medium (fig 3 and col 2 ln 61-67). It would have been obvious for one of ordinary skill in the art at the time of the applicant's invention to have a design choice of such placing of key information because the applicant has not explicitly stated such placing to solve any particular problem or any particular reasons of such placing and that the means of digitally recording ciphered data of Kanota-Takashi-Kondo would have been just as efficient.

As per claim 115, Kanota-Takashi-Kondo discloses the claimed limitations as described above (see claim 111). Kanota further discloses an analog video signal (col 3 ln 20-24) having a combination signal of plural pseudo

synchronization pulses and plural white peak signals included across plural horizontal periods in a vertical blanking period (col 3 ln 53-63).

As per claim 117, Kanota-Takashi-Kondo discloses the claimed limitations as described above (see claim 111). Kanota further discloses an analog video signal including a signal coded with plural bits at a pre-set position (col 3 ln 64- col 4 ln 16) and wherein said signal coded with plural bits includes a recording limitation indicating a limitation on recording (col 4 ln 2-22 and col 5 ln 2-14).

18. Claim 110 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kanota et al (hereinafter Kanota), US Patent 5,418,853, in view of Takashi, US Patent 5,960,151, in view of Konda, US Patent 5,538,773, and further in view of Sato, US Patent 5,392,128.

As per claim 110, Kanota-Takashi-Kondo discloses the claimed limitations as described above (see claim 110). Kanota-Takashi-Kondo is silent on wherein said record medium is an Integrated Circuit (IC) record medium.

However, Sato discloses recording of digital data wherein said source is an Integrated Circuit (IC) recording medium (col 14 ln 4-11). Both Kanota-Kondo and Sato disclose a means of digital recording and copy protection. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to combine the teachings of Sato within the system of Kondo because it would have provided an alternative means of compact storage of data. IC

recording mediums are well known in the art to be a compact form of storage resilient to data loss due to scratching of surfaces, such as CDs.

19. Claim 116 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kanota et al (hereinafter Kanota), US Patent 5,418,853, in view of Takashi, US Patent 5,960,151, in view of Konda, US Patent 5,538,773, and further in view of Ryan, US Patent 4,577,216.

As per claim 116, Kanota-Takashi-Kondo discloses the claimed limitations as described above (see claim 111). Kanota-Takashi-Konda discloses such recording of analog video signal, however is silent on such video signals associated color burst signal and wherein the phase of at least a portion of said color burst signal is changed from an original state. Ryan discloses copy inhibition of video signals having such associated color burst signal and wherein the phase of at least a portion of said color burst signal is changed from an original state (see for example; col 2 ln 1-51). Both Kanota-Takashi-Konda and Ryan disclose a means of inhibiting copying of video data using copy protection. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to combine the analog signal of Ryan within the system of Kanota-Takashi-Konda because it would have increased visual appeal of the recorded video data due to the extension into color video signals.

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20. Claims 118-120 and 122-123 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takashi, US Patent 5,960,151, in view of Kimoto et al (hereinafter Kimoto), US Patent 5,303,294, and further in view of Lieberfarb et al (hereinafter Lieberfarb), US Patent 5,488,410.

As per claim 118, Takashi discloses a digital signal record medium (digital VTR, col 1 ln 46-49), comprising:

a program area for storing a signal (col 6 ln 20-26);

a pre-set portion of said program area for storing playback mode control information (col 6 ln 20-26), said playback mode control information being indicative of a pre-set conversion operation on an analog signal generated from said signal (col 3 ln 4-7 and col 8 ln 15-17).

Takashi does not explicitly teach storing of a ciphered signal generated by ciphering signal with key information. Kimoto discloses a means of storing ciphered signals generated by ciphering signal with key information (col 4 ln 58-68). Both Takashi and Kimoto disclose a means of recording signals with playback control. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to combine the teachings of Kimoto within the system of Takashi because it would have increased security of playback systems due to the ciphering of signals on the recording medium.

As for a lead-in area for storing said playback mode control information, as an alternative to storing said playback mode control information is said pre-set portion of said program area, Takashi discloses a lead-in area (preamble, col 6 ln

47-59). Takashi-Kimoto is silent on such playback mode control information being stored in a lead-in area. However, Lieberfarb discloses a means of storing playback mode control information in a lead-in of a digital recording medium (col 11 ln 49-65). Both Takashi-Kimoto and Lieberfarb disclose a means of recording digital signals with playback control. Furthermore, lead-in areas are well known in the art to be a central area of data for reproducing apparatuses to find information for playback purposes. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to combine the teachings of Lieberfarb within the Takashi-Kimoto combination because it would have increased usability by providing an alternative means of storing playback mode control information.

As for a header portion of said program area and/or said lead-in area for storing said key information for use in deciphering said ciphered signal, Kimoto discloses a means of storing key information within a vertical blanking information area of said signal (col 5 ln5-19). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have a design choice in placing key information in a header portion of said program area and/or said lead-in area because the applicant has not stated that having key information in such an area solves any problems or for any particular reason other than for the purposes of reading the key for description and the means disclosed by Takashi-Kimoto-Lieberfarb is just as efficient.

As per claim 119, Takashi as modified discloses the claimed limitations as described above (see claim 118). Takashi further discloses wherein said pre-set portion of said program area is partitioned into a plurality of recording units (information block, col 6 ln 11-19).

As per claim 120, Takashi as modified discloses the claimed limitations as described above (see claim 118). Kimoto further discloses wherein said analog signal is an analog video signal and wherein said playback mode control information indicates arraying a combination signal of plural pseudo synchronization pulses and plural white peak signals across plural horizontal periods in a vertical blanking period of said analog video signal (line permutation, col 5 ln 1-19 and col 6 ln 26-40).

As per claim 122, Takashi as modified discloses the claimed limitations as described above (see claim 118). Kimoto further discloses wherein said analog signal is an analog video signal and wherein said playback mode control information indicates arraying a signal coded with plural bits at a pre-set position in said analog video signal (col 5 ln 26-40).

As per claim 123, Takashi as modified discloses the claimed limitations as described above (see claim 118). Takashi further discloses wherein said pre-set portion of said program area is located at a beginning portion of at least one

recording track on said medium (fig 2, col 6 ln 43-67). Takashi-Kimoto is silent on wherein said record medium is an optical disc medium and. However, Lieberfarb discloses a recording medium being an optical disc medium (abstract).

Both Takashi-Kimoto and Lieberfarb disclose a means of recording a signal with playback mode control. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to combine the recording medium of Lieberfarb within the Takashi-Kimoto combination because it universalizes movie distribution within one medium (Lieberfarb, col 1 ln 42-55).

21. Claim 121 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takashi, US Patent 5,960,151, in view of Kimoto et al (hereinafter Kimoto), US Patent 5,303,294, in view of Lieberfarb et al (hereinafter Lieberfarb), US Patent 5,488,410, and further in view of Ryan, US Patent 4,577,216

As per claim 121, Takashi as modified discloses the claimed limitations as described above (see claim 118). Takashi further discloses wherein said analog signal is an analog color video signal (col 5 ln 20-25). Takashi as modified does not explicitly teach wherein said playback mode control information indicates changing the phase of at least a portion of a color burst signal associated with said color video signal. Ryan discloses copy inhibition of video signals having such associated color burst signal and wherein the phase of at least a portion of said color burst signal is changed from an original state (see for example; col 2 ln 1-51). Both Takashi as modified and Ryan disclose a means of inhibiting

copying of video data using copy protection. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to combine the analog signal of Ryan within the Takashi as modified because it would have increased visual appeal of the recorded video data due to the extension into color video signals.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanhnga (Tanya) Truong whose telephone number is 703-305-0327.

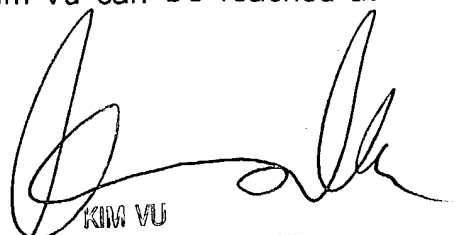
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached at 703-305-4393. The fax and phone numbers for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

TC 2100 will be moved to Carlyle in October 2004, the new telephone number for TC 2100 receptionist is 571-272-2100. In October 2004, any inquiry concerning this communication should be directed to Thanhnga (Tanya) Truong whose new telephone number is 571-272-3858, and the examiner's supervisor, Kim Vu can be reached at 571-272-3859.

TBT

October 1, 2004


KIM VU
SUPERVISOR PATENT EXAMINER
TECHNOLOGY CENTER 2100